

RANCHO SANTA ANA BOTANIC GARDEN
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WASHINGTONIA FILIFERA
CALIFORNIA FAN PALM

1941

RANCHO SANTA ANA BOTANIC GARDEN
of the
NATIVE PLANTS OF CALIFORNIA
Santa Ana Cañon, Orange County, California
Established 1927 in Memory of
JOHN W. BIXBY

WASHINGTONIA FILIFERA
CALIFORNIA FAN PALM

Palmaceae

Palm Family

Tree 30-75 ft. in height, with a cylindrical trunk often 3 ft. in diameter. In trees which have not been disturbed (by fire or otherwise) the trunk is clothed nearly to the ground by a dense "skirt" or thatch of the dead reflexed leaves and a cluster of 15-25 living leaves at the summit. Wood light and soft, composed of string-like vascular bundles separated by a soft spongy pith. Old, clean trunks gray-brown, marked with vertical as well as horizontal lines. Leaf with a petiole 5-6 ft. long, 2-3 in. broad, $\frac{3}{4}$ -1 in. thick, flattened on the upper side, convex on the lower side, the margins with stout upwardly pointed brown spines $\frac{1}{4}$ - $\frac{1}{2}$ in. long, usually longest near the base of the petiole, at its upper end prolonged into an arrowhead point or hastula 3-6 in. long. Leaf blade often nearly 6 ft. long, usually longer than broad, gray-green, the 50 or so segments joined for about $\frac{1}{2}$ their length and accordion pleated, the terminal portions distinct, and frayed into numerous filaments, all usually hanging more or less vertically. Flowers perfect, borne on a compound inflorescence 9-12 ft. long, arising just below the crown and from between the leaf bases, at first surrounded by the large spathe or bract, the main stalk often more than an inch in diameter. Flowers several thousand to each inflorescence, creamy white, about $\frac{1}{4}$ in. long, composed of 6 perianth segments, 6 exerted stamens with versatile anthers, a 3-celled ovary with a single style, 3-lobed at apex. Fruit a single-seeded, ellipsoidal black berry about $\frac{1}{4}$ in. long, the flesh thin and sweet, the seed brown with a white, hard albumen. Fruits mature from September to November. Cotyledons 1; in germination the seed remains underground and the stem tip grows erect for a few inches before the juvenile leaves appear. The root tip elongates rapidly, later developing cordlike roots, which in mature trees are many feet long, but seldom more than $\frac{1}{2}$ in. in diameter.

The genus *Washingtonia* (in honor of George Washington) was proposed by Hermann Wendland in 1879 and is now believed to consist of but two species, one essentially of California, the other restricted to Mexico.

Washingtonia filifera (the specific name in reference to the thread-like portions of the leaf margins) was described in 1874 by Linden as *Pritchardia filifera*. It was transferred by Wendland to *Washingtonia* in 1880. Other names which have been applied to this palm are: *Brahea filamentosa* by Kuntze in 1891; *Washingtonia filamentosa* by Kuntze in 1893; *Neowashingtonia filamentosa* by Sudworth in 1897; *Neowashingtonia filifera* by Sudworth in 1908; and *Washingtonia filifera* var. *robusta* by Parish in 1907.

The California Fan Palm (*Washingtonia filifera*) is widely scattered over the Colorado Desert of California, extending southward into northern Baja California and eastward into western Arizona. In California there are many famous groves of these trees, perhaps the most

publicized being the one in Palm Canyon, near Palm Springs. Dozens of isolated stands are known along wet spots bordering the Colorado Desert, most of which consist of but a few trees. In some of the best stands the trees range from young seedlings to old giants over 70 ft. in height. Where vandals have not burned the "skirts" they extend nearly to the ground, otherwise the trunks are likely to be bare and blackened. The localities where the California Fan Palm grow range in elevation from near sea level to about 3500 ft., in practically every instance being restricted to moist canyon bottoms or seepages where there is an adequate and constant supply of water. Numerous stations for *Washingtonia filifera* are recorded by Jepson (Flora of Calif., 1: 243. 1922).

The fruit of the California Fan Palm is delicious and sweet, not unlike a date, but there is little more than flavor between the dark skin, and the hard seed. However, the desert Indians highly valued them, eating the pulp and pounding the bony seeds into flour.

California Fan Palms planted near the ocean are subject to a rotting of the new leaves of the crown caused by a fungus (*Penicillium*), and for this reason the Southern or Mexican Palm should be substituted.

Principal use of the California Fan Palm in California is as a roadside or parkway tree. Little attempt has been made to create naturalistic group plantings with varied spacing and different aged trees, but this type of planting offers many possibilities, among them being the creation of landscape effects very similar to those found in native stands.

Propagation of *Washingtonia filifera* is by seeds which should be planted in outside seed beds or in boxes. They germinate in early spring and when the seedlings are about 6 in. high can be placed in containers or set out in nursery rows. By the latter method the seedlings can be grown for any number of years and are easily transplanted as balled specimens. Transplanting should be done in the spring. Any ordinary soil, slope or exposure will do, but rapid growth is only attained in rich soils with plenty of moisture.

At the Garden our largest trees are over 12 ft. high and are about 12 years old, but are in a dry situation where they receive little water. A second planting lines many hundred feet of canyon bottom and consists of several hundred trees of various ages. These have their roots in constantly moist soil and are now making rapid growth. In a few years this planting should very closely approximate a typical California desert palm canyon.

In California the two species of *Washingtonia* are often confused. The California Fan Palm (*W. filifera*) has a thick trunk 2-3 ft. in diameter, gray-green leaves, and a "skirt" or thatch which densely clothes the trunk. The Southern or Mexican Fan Palm (*W. robusta*) has a slender trunk, dark green leaves, and a "skirt" or thatch which neither completely hides the trunk, nor lies so close to it, also the leaves frequently drop or are blown off.

An unusually fine account of the botanical features of the *Washingtonias* is given by Dr. L. H. Bailey (Gentes Herbarium 4: 53-82. 1936).

CARL B. WOLF

RANCHO SANTA ANA BOTANIC GARDEN

Dedication of Garden Foundation to the Board of Trustees for the Rancho Santa Ana Botanic Garden of the Native Plants of California:

"THE NATURE, OBJECT AND PURPOSE OF THE INSTITUTION
HEREBY FOUNDED AND TO BE MAINTAINED HEREUNDER.

ITS NATURE: A botanic garden of the native plants of California, herbarium and botanical library, containing living and/or preserved specimens of trees, plants and flowers native to California, and literature relating thereto.

ITS OBJECT: The preservation and improvement of the property now transferred and such property as may hereafter be transferred to the Trustees for those who not only wish to enjoy, but to study, assembled in one accessible locality, native California plants; and for the advancement of science and education with reference to plant life indigenous to the State of California.

ITS PURPOSES: (a) An institution founded primarily for scientific research in the field of local botany.

(b) To preserve the native California flora, try to replenish the depleted supply of some of the rarest plants which are rapidly being exterminated, and bring together in a comparatively small area as complete a collection of the rich store of native California plants as can be grown in this southern section of the state, thereby promoting the general welfare of the people of the state by providing the means for encouraging and carrying on the above mentioned activities in said state and by doing such other things as may be necessary and desirable to carry out the objects hereof."

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